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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Complete If Known

10/811,960

Filing Date March 30, 2004

First Named Inventor Atul PURI

Art Unit 2631

Examiner Name Unassigned

Attorney Docket Number

13316/3294

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	

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		FOREIG	ON PATENT I	DOCUMENTS		
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	NON PATENT LITERATURE DOCUMENTS						
Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
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4	Trans. on Circuits and Systems for Video Technology, Apr. 1996, pp. 266-278, vol. 7, no. 2						
5	Quantization modeling," IEEE Trans. on Circuits and Systems for Video Technology, Feb. 1996, pp. 12-20, vol. 6, no. 1						
6	I-MING PAO and MING-TING SUN, "Encoding stored video for streaming applications," IEEE Trans. on Circuits and Systems for Video Technology, Feb. 2001, pp. 199-209, vol. 11, no. 2						
7	JORDI RIBAS-CORBERA and SM. LEI, "A frame-layer bit allocation for H.263+," IEEE						
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	3 4 5 6 7 8	<ul> <li>Cite No.¹ Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), dale, page(s), volume-issue number(s), publisher, city and/or country where published.</li> <li>ZHIHAI HE, Y.K. KIM, and S.K. MITRA, "Low-delay rate control for DCT video coding via ρ-domain source modeling," IEEE Trans. on Circuits and Systems for Video Technology, Aug. 2001, vol. 11, no. 8</li> <li>ZHIHAI HE and S.K. MITRA, "Optimum bit allocation and accurate rate control for video coding via ρ-domain source modeling," IEEE Trans. on Circuits and Systems for Video Technology, Oct. 2002, pp. 840-849, vol. 12, no. 10</li> <li>ZHIHAI HE and S.K. MITRA, "A unified rate-distortion analysis framework for transform coding," IEEE Trans. on Circuits and Systems for Video Technology, Dec. 2001, pp. 1221-1236, vol. 11, no. 12</li> <li>WEI DING, "Joint encoder and channel rate control of VBR video over ATM networks," IEEE Trans. on Circuits and Systems for Video Technology, Apr. 1996, pp. 266-278, vol. 7, no. 2</li> <li>WEI DING and B. LIU, "Rate control of MPEG video coding and recoding by Rate-Quantization modeling," IEEE Trans. on Circuits and Systems for Video Technology, Feb. 1996, pp. 12-20, vol. 6, no. 1</li> <li>I-MING PAO and MING-TING SUN, "Encoding stored video for streaming applications," IEEE Trans. on Circuits and Systems for Video Technology, Peb. 2001, pp. 199-209, vol. 11, no. 2</li> <li>JORDI RIBAS-CORBERA and SM. LEI, "A frame-layer bit allocation for H.263+," IEEE Trans. on Circuits and Systems for Video Technology, Oct. 2000, pp. 1154-1158, vol. 10, no. 7</li> <li>YAN YANG and S.S. HEMAMI, "Rate control for VBR video over ATM: Simplification and implementation," IEEE Trans. on Circuits and Systems for Video Technology, Nov. 2001, pp. 1045-1058, vol. 11, no. 9</li> <li>SUPAVADEE ARAMVITH, IM. PAO, and MT. Sun, "A rate-control for video transport over wireless channels,"</li></ul>					

Examiner	IA man Haldari	Date	02/19/2008
Signature	/Anner Holder/	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Complete if Known Substitute for form 1449A/B/PTO Application Number 10/811,960 INFORMATION DISCLOSURE Filing Date March 30, 2004 Atul PURI STATEMENT BY APPLICANT First Named Inventor Art Unit 2631 (Use as many sheets as necessary) Unassigned Examiner Name 2 13316/3294 Attorney Docket Number Sheet of

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Examiner	/Anner Holder/	Date	02/19/2008
Signature	William Holden	Considered	02/13/2000

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

## Complete if Known

Application Number 10/811,960

Filing Date March 30, 2004

First Named Inventor Atul PURI, et al.

Art Unit 2621

Examiner Name Tung T Vo

(Use as many sheets as necessary)

Sheet 1 of 1 Attorney Docket Number 13316-3294

-			U.S. PATENT [	OCUMENTS	
C	Cita	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant
Examiner Cite Initials No.1	Number - Kind Code <sup>2</sup> (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear	
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7A.H./	2	US- 6,040,861-A	03-21-2000	Boroczky et al.	
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Substitut	e for form 1449A/P1	EM 8	RADE	Complete if Known		
				Application Number	10/811,960	
INFC	INFORMATION DISCLOSURE			Filing Date	03/30/2004	
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	PURI, Atul	
				Art Unit	2631	
	(Use as many sl	ieels as	necessary)	Examiner Name	to be assigned	
Sheet	1	of	10	Attorney Docket Number	13316/3294	

		Document Number	Dublication Date	Name of Patentee or Applicant of	Pages Columns Lines Miless Release
Examiner Cite No.1		Number - Kind Code <sup>2</sup> (il known)	Publication Date MM-DD-YYYY	Cited Document	Pages, Columns, Lines, Where Relevar Passages or Relevant Figures Appear
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13316/3294

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Initials ' No.1		Number - Kind Code <sup>2</sup> (if known)	MINI-UD-TTTT		Passages or Relevant Figures Appear
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				Art Unit	2631	
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		Number - Kind Code <sup>2</sup> (if known)			Figures Appear
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Substitute	for form 1449D/P	то			Complete if Known
11150				Application Number	10/811,960
			CLOSURE	Filing Date	03/30/2004
STAT	EMENT E	BY A	PPLICANT	First Named Inventor	PURI, Atul
				Art Unit	2631
•	(Use as many s	heets as	necessary)	Examiner Name	to be assigned
Sheet	4	of	10	Attorney Docket Number	13316/3294

			FOREIGN	PATENT DOCUMENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	7⁵
RH	87	EP 0 283 715 A2	09/28/1988	ANT Nachrichtentechnik GmbH		Abs.
Ì	88	EP 0 400 756 A2	12/05/1990	N.V. Philips' Gloeilampenfabrieken Groenewoudseweg		
	89	EP 0 422 404 A2	04/17/1991	International Business Machines Corporation		
	90	EP 0 514 663 A2	11/25/1992	International Business Machines Corporation		
	91	EP 0 517 256 A2	12/09/1992	Sony Corporation		
	92	EP 0 534 350	03/31/1993	Matsushita Electric Industrial Co., Ltd (JP)		
	93	EP 0 540 961 A2	05/12/1993	International Business Machines Corporation		
	94	EP 0 566 219 A2	10/20/1993	Canon Kabushiki Kaisha		L
	95	EP 0 582 819 A2	02/16/1994	Sony Corporation		
	96	WO 94/27252 A	11/24/1994	Competitive Technologies, Inc.		
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	98	EP 0 753 970 A2	01/15/1997	Sharp Kabushiki Kaisha		
	99	CA 2,168,641	03/28/2000	Kabushiki Kaisha Toshiba, JP		

Examiner Signature	/Anner Holder/	Date Considered	02/19/2008

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Translation is attached.

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Substitute for form 1449E/PTO Complete if Known Application Number 10/811,960 INFORMATION DISCLOSURE Filing Date 03/30/2004 STATEMENT BY APPLICANT First Named Inventor PURI, Atul Art Unit 2631 (Use as many sheets as necessary) Examiner Name to be assigned of | 10 13316/3294 Attomey Docket Number Sheet 5

		NON PATENT LITERATURE DOCUMENTS
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/A.H./	100	CHEN, T., MPEG4 Video Verification Model VM 5.0, pages 2-192
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	102	KOGA, T. et al.; "Molion-Compensated Interframe Coding for Video Conferencing"; IE81-54; pages 85-90, C&C Systems Research Laboratories; Nippon Electric Co., Ltd; and English translation
	103	NONOMIYA, Y.; "Motion Correction for Interframe Coding Systems," IE78-6; pages 1-10; General Technology Research Institute; Nippon Broadcasting Association; and English translation
	104	Web site material, "MPEG-4: A Flexible Coding Standard for the Emerging Mobile Multimedia Applications,"  http://www.tnt.uni-hannover.de/project/eu/momusys/docs/Paper/IST/pimrc/pimrc.html
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	106	PLOYSONGSANG, A. et al., "DCT/DPCM Processing of NTSC Composite Video Signal," IEEE Transactions On Communications, vol. COM-30, no. 3, pp. 541-549, XP002062314, ISSN: 0090-6778, 1 March 1982 (1982-03-01)
	107	CHAM et al., "DC Coefficient Restoration in Transform Image Coding," IEE Proceedings, Vol. 131, Pt. F, No. 7, pages 709 - 713, December 1984
	108	SEE et al., "Efficient Encoding of DC Coefficients in Transform Coding of Images Using JPEG Scheme," Signal Image and Video Processing, Vol. 1, No. Symp. 24, published 11/06/1991, Institute of Electrical and Electronics Engineers, June 11-14, 1991, pages 404-407, Singapore
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Examiner Signature	/Anner Holder/	Date Considered	02/19/2008

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Substitute	for form 1449	F/PTO			Complete if Known
		<u> </u>	01 001105	Application Number	10/811,960
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	03/30/2004
				First Named Inventor	PURI, Atul
				Art Unit	2631
(Use as many sheets as necessary)			necessary)	Examiner Name	to be assigned
Sheet	6	of	10	Attorney Docket Number	13316/3294

			NON PATENT LITERATURE DOCUMENTS	
	Examiner Initials *		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the iter (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
/A	/A.H./		KOK, C. W. et al.: "Image Coding Using DCT of Wavelet Coefficients," Proceedings of the IEEE-SP International Symposium Time-Frequency and Time-Scale Analysis (CT. No. 92TH0478-8), pp. 475-478, XP002115625 1992, NY, NY, IEEE, USA ISBN: 0-7803-0805, Victoria, BC, Canada, 4-6 Oct. 1992	
			TEST MODEL EDITING COMMITTEE, TELECOMMUNICATION STANDARDIZATION SECTOR, STUDY GROUP 15, EXPERTS GROUP FOR ATM VIDEO CODING (RAPPORTEUR'S GROUP ON PART OF Q.2/15), INTERNATIONAL ORGANISATION FOR STANDARDISATION ORGANISATION INTERNATIONALE DE NORMALISATION ISO-IEC/JTC1/SC29/WG11 MPEG93/457, "Test Model 5," Draft, Document AVC-491, Version 1, Coded Representation of Picture and Audio Information, April 1993	
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		115	INTERNATIONAL ORGANISATION FOR STANDARDISATION ORGANISATION INTERNATIONALE DE NORMALISATION ISO/IEC JTC1/SC29/WG11, N0702 (revised); Incorporating N0702 (revised), incorporating N702 Delta of 24 March and Further Editorial Corrections; "Information Technology — Generic Coding of Moving Pictures and Associated Audio Information: Video, Recommendation H.262"; ISO/IEC 13818-2; May 10, 1994	
-		116	SCHMIDT et al., "Performance Evaluation of Nonscalable MPEG-2 Video Coding," AT&T Bell Laboratories, Holmdel, New Jersey, Visual Communications and Image Processing '94, Katsaggelos, Aggelos K., Chair/Editor, Chicago, Illinois, Pages 296-310, Vol 2308, Part One, SPIE – The International Society for Optical Engineering, Bellingham, Washington, September 25-29, 1994	
		117	INTERNATIONAL ORGANISATION FOR STANDARDISATION; Generic Coding of Moving Picture and Associated Audio Information; Video; ISO/IEC JTC1/SC29/WG11 NXXXX; ISO/IEC 13818-2, November 1994	
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		120	HARTMAN et al., The VRML 2.0 Handbook Building Moving Worlds on the Web, pages 45-46, 264-265, Silicon Graphics, Inc. Addison-Wesley Publishing Co., 1996	

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Substitute	e for form 1449G/F	то		Complete if Known		
INFORMATION DISCLOSURE				Application Number	10/811,960	
				Filing Date	03/30/2004	
STA	TEMENT	BY A	PPLICANT	First Named Inventor	PURI, Atul	
	•			Art Unit	2631	
(Use as many sheets as necessary)				Examiner Name	to be assigned	
Sheet	7	of	10	Attorney Docket Number	13316/3294	

		NON PATENT LITERATURE DOCUMENTS
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/A.H./	121	PURI, Atul, "Status and Direction of the MPEG-4 Standard," AT&T Bell Labs, Holmdel, NJ, Multimedia Communications and Video Coding, Wang et al., Editors, pages 349-356, Plenum Press, New York, 1996
	122	CHIARIGLIONE, Leonard, Florence Press Release, Source: "MPEG Press Release," Int'l Organisation for Standardisation, Coding of Motion Pictures and Audio, ISO/IEC JTC1/SC29/WG11N 1249, pp. 1-3, Firenze (Florence), Exhibit B, March 1996
	123	PURI et al., "Initial B-Picture Syntax Proposal for MPEG-4 Video," Int'l Organisation for Standardization, Coding of Moving Pictures and Associated Audio, ISO/IEC JTC1/WG11/MPEG 96/ 0776, Florence, March 1996
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	127	SCHMIDT, R. L., PURI, A. and HASKELL, B. G. (AT&T); INTERNATIONAL ORGANISATION FOR STANDARDIZATION ORGANISATION INTERNATIONALE DE NORMALISATION ISO/IEC JTC1/SC29/WG11, MPEG96/1084; Coding of Moving Pictures and Associated Audio, "Results of Scalability Experiments"; Tampere, Finland, July 1996
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Examiner		Date	02/19/2008	
Signature	/Anner Holder/	Considered		

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Substitute	e for form 1449H/PT	0			Complete if Known
	511.7161		01 001155	Application Number	10/811,960
			Filing Date	03/30/2004	
STATEMENT BY APPLICANT				First Named Inventor	PURI, Atul
				Art Unit	2631
(Use as many sheets as necessary)				Examiner Name	to be assigned
Sheet	8	of	10	Attomey Docket Number	13316/3294

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	133	CHEN et al., IEEE International Conference on Image Processing, "An Approach to Region Coding for Content-Based Scalable Video," September 16, 1996, vol. 3, pp. 399-402
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Examiner Signature /Anner Holder/	Date Considered	02/19/2008
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		NON PATENT LITERATURE DOCUMENTS
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AV	140	TEKALP & VAN BEEK, "CORE EXPERIMENT M2: Triangular Mesh-Based Coding with Object-Based Functionalities," International Organization for Standardisation - University of Rochester, ISO/IEC JTC1/SC29/WG11 MPEG96/1627, pages 1-18, February 1997
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	146	Web site material, "The Structure of the MPEG-4 Video Coding Algorithm," http://www.ee.lisc.emet.in/people/students/gupta/ Mpeg4/Coding/fmpeg4vm.htm (3/1/98)
	147	INT'L. ORGANIZATION FOR STANDARDISATION, CODING OF MOVING PICTURES AND AUDIO, ISO/IEC JTC1/SC29/ WG11, N2403, "MPEG-4 Standard Completed," 6 pages, October12-16, 1998
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Examiner	/Anner Holder/	Date	02/19/2008
Signature	/Anner Holder/	Considered	02/19/2000

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Substitute for form 1449J/PTO Complete if Known Application Number 10/811,960 INFORMATION DISCLOSURE 03/30/2004 Filing Date STATEMENT BY APPLICANT First Named Inventor PURI, Atul Art Unit 2631 (Use as many sheets as necessary) Examiner Name to be assigned of 10 13316/3294 Attorney Docket Number Sheet

			NON PATENT LITERATURE DOCUMENTS
Initials No.		Cite No.'	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		150	PURI et al., "Scene Description, Composition, and Playback Systems for MPEG-4," SPIE, Visual Communications and Image Processing '99, San Jose, California, pp. 2-13, January 25-27, 1999
		151	PURI, A. and TEKALP, A. M., "MPEG-4 and MPEG-7 Standards," Electronic Imaging, Course Notes, San Jose, January 1999
		152	MPEG-4 SYSTEMS GROUP, N2739, "Text for ISO/IEC 14496-1/PDAM1," ISO/IEC JTC1/SC29/WG11, March 1999
		153	MPEG-4 SYSTEMS GROUP, N2741, "MPEG-4 Systems Version 2 Verification Model 6.0," ISO IEC JTC1/SC29/WG11, March 1999
		154	Web site material, "Object-Based Coding," <a href="http://www.ece.concordia.ca/ÿsorial/seminar 1/node18.html">http://www.ece.concordia.ca/ÿsorial/seminar 1/node18.html</a> (7/14/99)
		155	LIFSHITZ, Z., DICAGNO, G., FRANCESCHINI, G. and BATTISTA, S., "MPEG-4 Players Implementation," Multimedia Systems, Standards, and Networks, Puri, A. and Chen, T., Editors, Chapter 16, pp. 461-486, Marcel Dekker, Inc., New York, New York, 2000
		156	PURI, A. and CHEN, T., editors, <i>Multimedia Systems, Standards, and Networks</i> , Chapters 3-5, 7-9, 12 and 13; Marcel Dekker, Inc., New York, New York, 2000
		157	INT'L. ORGANISATION FOR STANDARDISATION; CODING OF MOTION PICTURES AND AUDIO, ISO/IEC 14496-2: 1999/Amd. 1:2000(E); ISO/IEC JTC1/SC29/WG11; SC 29 Secretariat: JISC; "Information Technology - Coding of Audio-Visual Objects - Part 2: Visual, Amendment 1: Visual Extensions; Exhibit D; January 31, 2000

Examiner	/A Helder/	Date Considered	02/19/2008
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	Complete if Known	
Application Number	10/811,960	
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First Named Inventor	PURI	
Art Unit	2631	
Examiner Name	Not assigned	
Attorney Docket Number	2777/3294	

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Examiner Initials * Cite				
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	•	A. Hanjalic, "Shot-Boundary Detection: Unraveled and resolved?," IEEE Transactions on Circuits and Systems for Video Technology, vol. 12, no. 2, pp. 90-105, February 2002.		
	•	C-L. Huang and B-Y Llao, "A robust scene-change detection method for video segmentation," IEEE Signal Processing Letters, vol. 7, no.7, pp. 173-175, July 2000.		
		T. Vlachos, *Cut detection in video sequences using phase correlation,* IEEE Signal Processing Letters, vol. 7, no. 7, pp. 173-175, July 2000.		
		U. Gargi, R. Kasturi, and S.H. Strayer, "Performance characterization of video shot change detection methods," IEEE Transactions on Circuits and Systems for Video Technology, vol. 10, no. 1, pp. 1-13, February 2000.		
		R.M. Ford, C. Robson, D. Temple, and M. Gerlach, "Metrics for shot boundary detection in video sequences," Multimedia Systems, vol. 8, pp. 37-46, 2000.		
		B-L Yeo and B. Liu, "Rapid Scene analysis on compressed video," IEEE Transactions on Circuits and Systems for Video Technology, vol. 5, no. 6, pp. 533-544, December 1995.		
		H.J. Zhang, C.Y. Low, and S.W. Smoliar, "Video parsing and browsing using compressed data," Multi-media Tools and Applications, vol. 1, no. 1, pp. 89-111, March 1995.		
		H.C. Liu and G. Zick, "Automatic determination of scene changes in MPEG compressed video," in <i>Proc. IEEE Symp. Circuits and Systems</i> , Seattle, 1995, vol. 1, pp. 764-767.		
1		Z. Cernekova, C. Nikou, and I. Pitas, "Shot detection in video sequences using entropy-based metrics," in Proceedings of IEEE International Conference on Image Processing, 2002, vol. 3, pp. 421-424.		
		B. Shahraray, "Scene change detection and content-based sampling of video sequences," in <i>Digital Video Compression: Algorithms and Technologies</i> , 1995, vol. SPIE-2419, pp. 2-13.		

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		NON PATENT LITERATURE DOCUMENTS			
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/A.H./	*	Jungwoo Lee and Bradley W. Dickinson, "Temporally adaptive motion interpollation exploiting temporal masking in visual perception," <i>IEEE Transactions on Image Processing</i> , vol. 3, no. 5, pp 513-526, Sept. 1994.			
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		FOREIGN PA	TENT DOCUME	NTS		
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>4</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		NON PATENT LIT	ERATURE DOCUM	L IENTS	<u> </u>	
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/A.H./		Siwei Ma et al., "Rate Control for Advance Video Coding (AVC) Standard," <i>Proceedings of the 2003 IEEE International Symposium on Circuits and Systems</i> , Volume II of V, 2003, pp. 892-5.				
/A.H./		Arian Koster, "Coded Representation of Picture and Audio Information," International Organisation for Standardisation, Telecommunication Standardization Sector, Study Group 15, Experts Group for ATM Video Coding (Rapporteur's Group on Part of Q.2/15), Document AVC-491, Version 1, April 1993, 126 pp.				

Examiner Signature	/Anner Holder/	Date Considered	02/19/2008	
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